

# JOURNEY OF THE AIR

5 steps to provide clean and healthy air



ANTI BACTERIAL



ANTI-ALLERGENS



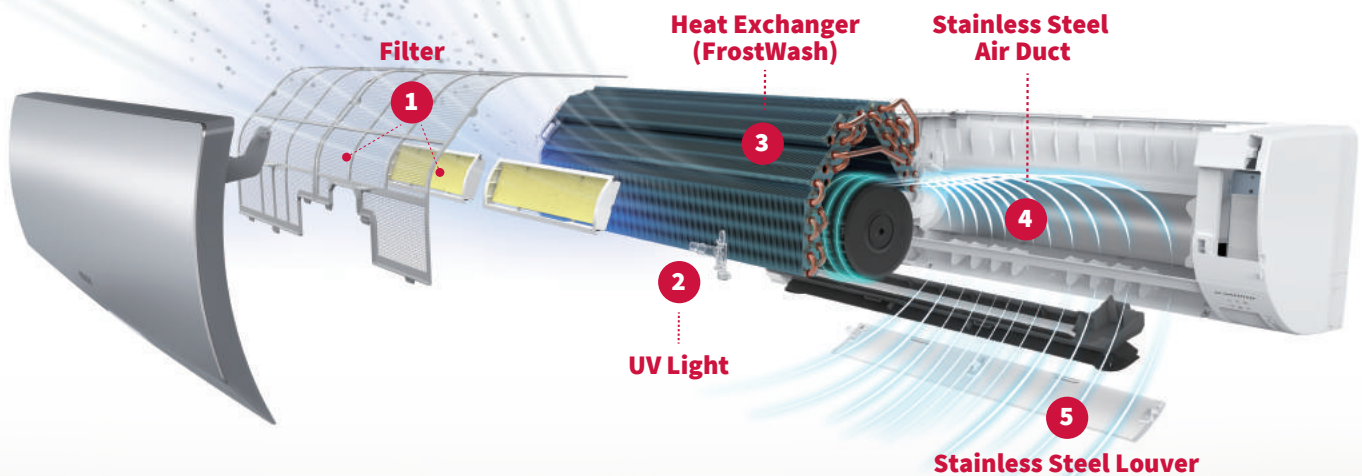
DUST



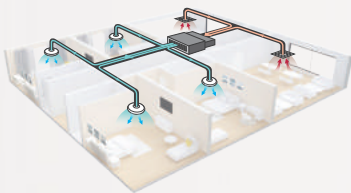
ODOR REMOVAL



MOLD SUPPRESSION



## Indoor air circulation



### Cross Region Circulation

Cross region circulation implies that the air is shared by various regions within a building. This means that during operation, air from one room will eventually be mixed with that of another room.

VS.



### Single Region Circulation

Units that are for single region circulation intake the air from the space in which it operates. The air circulates only in one space and there is less likelihood that it will mix with the air of other spaces.

### Benefit:

In relation to air contamination, the benefit of using single region units is that it recirculates the air of the space in which it operates, meaning there is less concern of it mixing with air from other rooms. This also greatly reduces the risk of disease transmission, however, proper ventilation is still recommended when using both of these types of air conditioning solutions.



Air is made up of 78% nitrogen 21% oxygen and 1% of other gases. However, the air we breathe also contains invisible threats that can lead to discomfort and even poor health, such as bacteria, mold, dust... This is why we have developed intelligent technology which cleans the air you breathe. Here is what happens to the air when it comes into a unit and how we treat it.

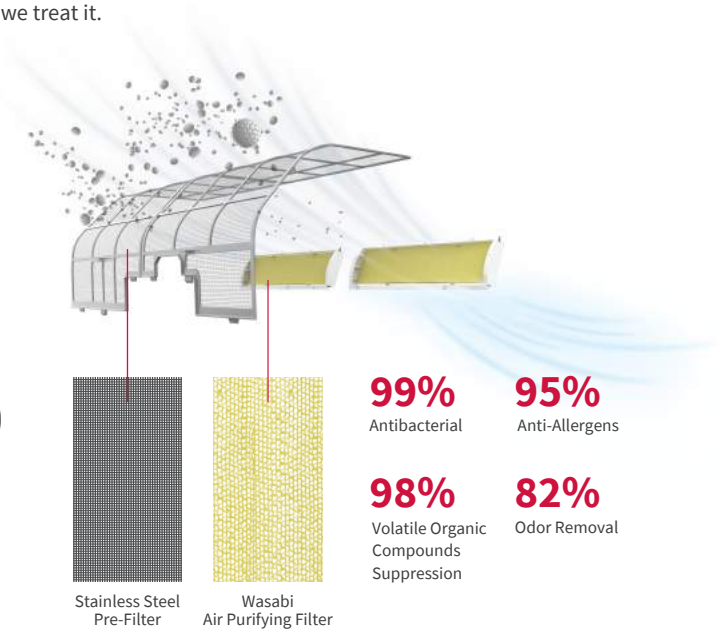
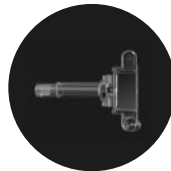
**Filter**

**1. Air Purifying Filter & UV Fresh**

When the air enters the unit, the first stop is to pass through the filter. The filter is coated with a unique hybrid formula made from a Nano Titanium and Wasabi solution.

Working together with the Stainless Pre-filter, the Wasabi Air Purifying Filter provides another layer of filtration that has powerful antibacterial<sup>(\*1)</sup>, anti-allergen<sup>(\*3)</sup>, anti-mold<sup>(\*4)</sup>, and deodorising<sup>(\*4)</sup> properties.

2. UV Fresh emits shortwave ultraviolet light onto the filters from an internal LED, neutralizing **99%**<sup>(\*2)</sup> of bacteria trapped on the filter to keep the inside of your unit clean and reducing the risk of odors.



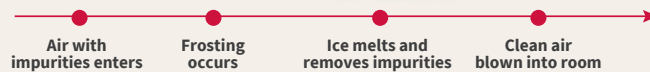
\*1 Wasabi Air Purifying Filter tested by University Putra Malaysia.  
 \*2 UV Fresh tested by Japan Food Research Laboratories.  
 \*3 Wasabi Air Purifying Filter tested by International Medical University Malaysia.  
 \*4 Wasabi Air Purifying Filter tested by Nanopac Testing Lab.  
 \*5 Stainless Steel System tested by the Hitachi Environmental Test Laboratory.

**FrostWash**

When operating an AC unit, there is moist air inside that remains inside. If this is not cleaned efficiently or regularly, it becomes a place where bacteria and mold can grow. This can lead to unpleasant odors which make the room smell 'off'.

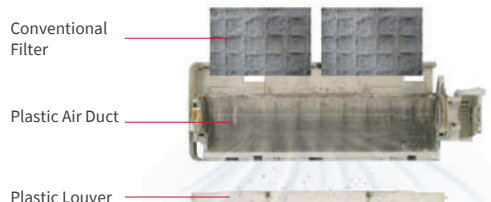
However, Hitachi Cooling & Heating has developed technology that collects this moisture by freezing it. Once frozen it is automatically melted and washed away, removing impurities caught in the ice.

This simple action is called FrostWash, a process which is able to reduce bacteria, mold, and odors by **93%**.



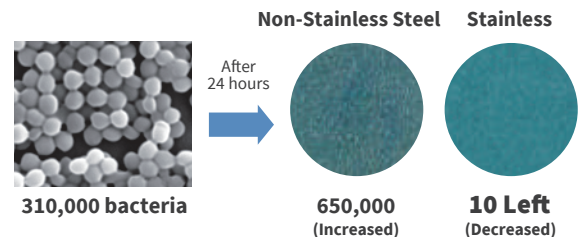
**Stainless Steel Air Duct**

Conventional filters that are fit with plastic air ducts and plastic louvers can face a high build up of dust and bacteria that impairs air quality after 10 years of use. To make sure that the air passing through the unit is cleaned effectively, Hitachi Cooling & Heating uses stainless steel for the majority of the components within the unit to prevent corrosion and reduce bacteria by up to 99%\*1.



\*1 Stainless Steel System tested by Boken Quality Evaluation Institute.

**Antibacterial Test**



Tested by Boken Quality Evaluation Institute. Test No. 20214009288-1, 10218327, 022580-1. Test Method Based on JIS Z 2801 Quantitative Test.

**Stainless Steel Louver**

The final step on the air's journey before being blown back out into the space is passing the louver, which is also made of stainless steel. Programmed or using thermal and image sensors, the louver delivers the air back into the space as required.